Step 1 - Project Information

Region:	BTO
Proposed Project Name:	Sample DMS and CCTV Project
Requested By:	Sample User

1 Using each of the following Needs Analysis Tool presets, provide the anticipated level of need in the vicinity of the proposed project. Access the Needs Analysis Tool here: **https://transportal.cee.wisc.edu/gis/webmaps/tip**.

Default TIP	MEDIUM
Safety	MEDIUM
Mobility (Present)	MEDIUM
Mobility (Future)	MEDIUM
Service	MEDIUM
Freight Performance	MEDIUM

2 Briefly describe the proposed project. Please include the purpose and any relevant information.

The proposed project would purchase and install three roadside DMS and two ITS cameras. The DMS would replace the semi permanent PCMS that are currently used. These additions would benefit from a short fiber connection to connect to one of the CCTVs and DMS.

3 Identify any stakeholders who have been involved with the development of this project.

☐	State Patrol	specify:	
☐	TOPS Lab (UW)	specify:	
☐	Project Team	specify:	
☐	Regional Stakeholders	specify:	
☑	BTO Stakeholders	specify:	***TMC***
☑	Local Agencies	specify:	***County***
☐	Other Agencies:	specify:	

4 Briefly describe the outcome of the collaboration identified above.

The existing PCMS are aging faster than expected. We need to replace these with permanent DMS and include two cameras to monitor routine weather-related travel issues.

5 Please provide any further information that will be relevant when considering this project.

Operations and Maintenance Considerations

6 Indicate whether the following operations and maintenance items have been considered:

☑ What – What are the elements and the high-level capabilities of the system?

The elements include DMS, cameras, and fiber used to monitor and warn travelers about routine weather-related travel issues.

☐ What – What existing networks will be affected by the system?

☑ Where – What is the geographic and physical extent of the system?

The project will span 2 miles of Highway XYZ in the Eastwest region.

☑ When – List the sequence of activities that will be performed?

Fiber will be trenched. DMS and Camera foundations and pole will be installed. Hardware will be installed and tested. Hardware will be connected to network and connections will be tested. PCMS will be removed.

☑ Why – Provide the problem or opportunity addressed by the system?

This project largely retains the existing funcationality of the PCMS with improved visbility provided by additional cameras and lowered maintenance cost by the permanent DMS.

☐ How – How will the system be developed?

☑ How – How will the system be operated? Are there available resources to take on this responsibility or will additional resources be required? Will additional training be required?

This equipment will be added to existing video management and ATMS systems and operated by the TMC.

☑ How – How will the system be maintained? Are there available resources to take on this responsibility or will additional resources be required?

This system will be maintained under the ITS maintenance contract.

7 What new integrations into software systems will be required with this proposed deployment?

These CCTV devices will need to be incorporated into the video management system.

8 Indicate any further information that will be helpful to document pertaining to operations and maintenance of the proposed deployment:

Transportation System Management and Operations - Traffic Infrastructure Process

Step 4 - Project Submission

Submission Process:

Once steps 1-3 are completed, please verify the summary information below is correct. The *Create Benefits Tool Output* button below will generate a .pdf of the information provided in Step 1, this summary sheet, and detailed sheets of any of the selected treatments below. This output should be combined with documents listed below into one PDF and uploaded in the appropriate regional SharePoint folder with the following file naming convention: Region_Project Name_Contact_date.pdf

Additional Required Documents:

- ☑ Project Needs Maps
- ☑ Project Needs Reports
- ☐ Any supporting information as deemed necessary

Summary of Benefits:

Select which treatments apply to your project:

- ☑ Comm
- ☑ DMS
- ☑ CCTV
- ☐ TRAWS
- ☐ Other

Consolidated Project Benefits, Costs, and Ratio

20-Year Monetized Benefits =	**$ 1,801,860**
20-Year Estimated Costs =	**$ 837,208**
Benefit-Cost Ratio =	**2.15 :1**
Return-on-Investment =	**115%**

Y1	Annual Benefit	$ 158,956	Y11	Annual Benefit	$ 80,805
Y1	Estimated Cost	$ 630,000	Y11	Estimated Cost	$ 71,027
Y2	PV Annual Benefit	$ 148,557	Y12	PV Annual Benefit	$ 75,519
Y2	PV Estimated Cost	$ 13,752	Y12	PV Estimated Cost	$ 6,668
Y3	PV Annual Benefit	$ 138,838	Y13	PV Annual Benefit	$ 70,578
Y3	PV Estimated Cost	$ 12,012	Y13	PV Estimated Cost	$ 6,106
Y4	PV Annual Benefit	$ 129,755	Y14	PV Annual Benefit	$ 65,961
Y4	PV Estimated Cost	$ 11,226	Y14	PV Estimated Cost	$ 5,707
Y5	PV Annual Benefit	$ 121,267	Y15	PV Annual Benefit	$ 61,646
Y5	PV Estimated Cost	$ 10,492	Y15	PV Estimated Cost	$ 5,333
Y6	PV Annual Benefit	$ 113,333	Y16	PV Annual Benefit	$ 57,613
Y6	PV Estimated Cost	$ 9,805	Y16	PV Estimated Cost	$ 4,984
Y7	PV Annual Benefit	$ 105,919	Y17	PV Annual Benefit	$ 53,844
Y7	PV Estimated Cost	$ 9,164	Y17	PV Estimated Cost	$ 4,658
Y8	PV Annual Benefit	$ 98,990	Y18	PV Annual Benefit	$ 50,321
Y8	PV Estimated Cost	$ 8,564	Y18	PV Estimated Cost	$ 4,354
Y9	PV Annual Benefit	$ 92,514	Y19	PV Annual Benefit	$ 47,029
Y9	PV Estimated Cost	$ 8,004	Y19	PV Estimated Cost	$ 4,069
Y10	PV Annual Benefit	$ 86,462	Y20	PV Annual Benefit	$ 43,953
Y10	PV Estimated Cost	$ 7,480	Y20	PV Estimated Cost	$ 3,803

Transportation System Management and Operations - Traffic Infrastructure Process

Project Benefit-Cost Analysis - Communication Infrastructure

Design-build and integrate fiber optic links between existing fiber infrastructure and signal systems, or procure and install cellular Ethernet modems.

Region:	BTO
Proposed Project Name:	Sample DMS and CCTV Project
Requested By:	Sample User

1 What is the anticipated present value cost of the project?

$50,000

2 Using each of the following Needs Analysis Tool presets, provide the anticipated level of need in the vicinity of the proposed project:

Default TIP	MEDIUM
Safety	MEDIUM
Mobility (Present)	MEDIUM
Mobility (Future)	MEDIUM
Service	MEDIUM
Freight Performance	MEDIUM

Productivity Benefits

P1. Will construction of this infrastructure eliminate the need to use currently leased fibers?

No

If so, how many fiber pairs are currently leased?

fiber pairs

P2. How many device locations will be provided communication through this infrastructure?

2 locations

P3. How many miles of fiber will be constructed with this project?

1 miles

P4. Will this communication infrastructure be leased as a revenue source?

No

P5. If leased, how many fiber pairs are expected to be leased?

fiber pairs

Estimated Annual Productivity Benefit: $4,600

Redundancy Benefits

R1. Will this installation of communication infrastructure provide a redundant link?

Yes

R2. Does this link provide redundancy to communication infrastructure that is leased to others?

No

R3. Based on the portion of the network that is provided redundancy with this link, how would you rate the importance of this link?

Somewhat Critical

R4. Approximately how many outages are experienced per year that will benefit from this redundant link?

5 outages per year

Estimated Annual Redundancy Benefit: $10,967

Benefit-Cost Analysis

Y1	Annual Benefit	$	4,600	Y11	Annual Benefit	$	2,338
Y1	Estimated Cost	$	50,000	Y11	Estimated Cost	$	1,025
Y2	PV Annual Benefit	$	4,299	Y12	PV Annual Benefit	$	2,185
Y2	PV Estimated Cost	$	2,016	Y12	PV Estimated Cost	$	958
Y3	PV Annual Benefit	$	4,018	Y13	PV Annual Benefit	$	2,042
Y3	PV Estimated Cost	$	1,761	Y13	PV Estimated Cost	$	895
Y4	PV Annual Benefit	$	3,755	Y14	PV Annual Benefit	$	1,909
Y4	PV Estimated Cost	$	1,646	Y14	PV Estimated Cost	$	837
Y5	PV Annual Benefit	$	3,509	Y15	PV Annual Benefit	$	1,784
Y5	PV Estimated Cost	$	1,538	Y15	PV Estimated Cost	$	782
Y6	PV Annual Benefit	$	3,280	Y16	PV Annual Benefit	$	1,667
Y6	PV Estimated Cost	$	1,437	Y16	PV Estimated Cost	$	731
Y7	PV Annual Benefit	$	3,065	Y17	PV Annual Benefit	$	1,558
Y7	PV Estimated Cost	$	1,343	Y17	PV Estimated Cost	$	683
Y8	PV Annual Benefit	$	2,865	Y18	PV Annual Benefit	$	1,456
Y8	PV Estimated Cost	$	1,255	Y18	PV Estimated Cost	$	638
Y9	PV Annual Benefit	$	2,677	Y19	PV Annual Benefit	$	1,361
Y9	PV Estimated Cost	$	1,173	Y19	PV Estimated Cost	$	596
Y10	PV Annual Benefit	$	2,502	Y20	PV Annual Benefit	$	1,272
Y10	PV Estimated Cost	$	1,097	Y20	PV Estimated Cost	$	557

20-Year Monetized Benefits = $ 52,144

20-Year Estimated Costs = $ 70,967

Benefit-Cost Ratio = 0.73 :1

Return-on-Investment = -27%

Transportation System Management and Operations - Traffic Infrastructure Process

Project Benefit-Cost Analysis - Dynamic Message Sign (DMS)

Region:	BTO
Proposed Project Name:	Sample DMS and CCTV Project
Requested By:	Sample User

1 What is the anticipated cost of the project (total design, construction, and communication cost)? $450,000

2 What is the anticipated number of DMS to be installed for the project? 3

3 Please complete the Guidance Analysis below to define the intent of the project. The summary of your results is listed here:

G1, Weather Conditions	SUPPORTED
G2, Traffic Conditions	PARTIALLY SUPPORTED
G3, Traffic Control	NOT SUPPORTED
G4, Special Events	NOT SUPPORTED

DMS Guidance Analysis:

The ITS Planning Guidance below was completed by an ENTERPRISE Pooled Fund Study and is used here to help define the intent of the DMS.

DMS Guidance #1 - To Inform Travelers of Weather Conditions

Consideration		Response
1	If the location is prone to weather situations that travelers would not otherwise be forewarned about (e.g. spots where fog regularly forms, bridges that ice early, mountain passes with weather that differs from approaches).	YES
2	If there is available road weather information for the area downstream of the candidate DMS location.	YES
3	If there is the capability (either manually by staff members or automated through a condition reporting system) to create event specific descriptions of weather conditions to be displayed on the DMS.	YES
4	If there is a need to disseminate event specific descriptions (rather than simply activating a flashing warning sign that says "Weather Alert When Flashing").	YES
5	If there are options for either alternate routes or services, that might be described on the DMS, where travelers may wait out conditions.	YES
6	If flashing beacon signs have been tried and not proven to generate responses from travelers.	NO
7	If weather events contribute to a significant number of crashes or road closures which have major impacts to travelers.	YES
	DMS Guidance #1 is:	SUPPORTED

DMS Guidance #2 - To Inform Travelers of Traffic Conditions

Consideration		Response
1	If the target area is monitored by CCTV cameras, traffic detectors, or another method of monitoring the conditions, or has travel times for the downstream stretch of road.	NO
2	Events occurring in the area unexpectedly impact or impede traffic (e.g. close a lane, encounter slow traffic in one or more lanes, or events on the shoulder) an average of at least two times per month.	NO
3	If there are acceptable alternate routes with capacity to accept vehicles that may deviate based upon the information.	YES
4	If the location is a stretch of road where no alternate route are possible and travelers would benefit from information describing the cause and/or extent of delays in order to relieve driver anxiety or confusion.	NO
5	If there are horizontal or vertical curves that create safety issues when traffic is stopped unexpectedly.	NO
6	The route being considered for the DMS has on average at least 2 hours per day of peak period travel where traffic flow exceeds 1,100 veh/hr/lane.	NO
7	The route being considered for the DMS has on average experienced conditions considered Level of Service C.	NO
8	The route being considered for the DMS experiences average annual daily traffic (AADT) of 16,800 for a 2 lane road; 33,600 for a 4 lane road; 50,400 for a 6 lane road, 67,200 for an 8 lane road.	NO
	DMS Guidance #2 is:	PARTIALLY SUPPORTED

DMS Guidance #3 - Changing Traffic Control or Conditions (Work Zone)

Consideration		Response
1	The candidate location is upstream of an area with construction or maintenance activities that are expected to cause at least 15 minutes of delay to the mainline traffic.	NO
2	If the candidate location is upstream of traffic control or construction/maintenance activities that are expected to change more frequently than once every 60 days.	NO
3	If the posted work zone speed limit is greater than 45 MPH.	NO
	DMS Guidance #3 is:	NOT SUPPORTED

DMS Guidance #4 - Special Events

Consideration		Response
1	If the location contains a venue that houses ticketed events (typically with rapid and tight arrival patterns for a specified start time).	NO
2	If the event venue typically houses at least two weekday (M-F) ticketed event per week (including seasonal sporting events that only occur during the season).	NO
3	If the event venue typically houses at least 10 events per year attracting 30,000 visitors or more.	NO
4	If the setting of the venue is such that mainline traffic (not attending the event) is impacted by the conditions.	NO
5	If there are alternate parking or traffic options that could be displayed on signs to direct visitors to more preferred options.	NO
	DMS Guidance #4 is:	NOT SUPPORTED

4 How many crashes, by severity, occurred in the past year at this/these corridor(s)? Use 1 miles upstream traffic from DMS sign. If using the Needs Analysis Tool to obtain crash data, divide the 5 year crashes by 5 to provide an average annual number of crashes.

0	Fatal Injury
1	Suspected Serious Injury
0	Suspected Minor Injury
0	Possible Injury
12	Property Damage-Only

5 Estimate the average number of traffic/weather/special events that occur per year that will be positively affected by use of the proposed DMS.

5	events per year

6 Estimate the average duration (minutes) of traffic events (due to weather or incidents) that occur and will be positively affected by use of the proposed DMS.

90	minutes

7 Estimate the average travel time savings from adjusting one's route based on direction given on the proposed DMS.

30	minutes

8 Provide the current **directional** AADT along the corridor where the proposed DMS will be deployed (the Needs Analysis Tool may be used to obtain the value - note that volume is reported per roadway and not bi-directional).

7,500	veh per day

Estimated Annual Safety Benefit:	$112,000
Estimated Annual Mobility Benefit:	$8,000
Estimated Annual Energy and Environment Benefit:	$500

Benefit-Cost Analysis

Y1	Annual Benefit	$ 120,500	Y11	Annual Benefit	$ 61,256
Y1	Estimated Cost	$ 450,000	Y11	Estimated Cost	$ 3,917
Y2	PV Annual Benefit	$ 112,617	Y12	PV Annual Benefit	$ 57,249
Y2	PV Estimated Cost	$ 7,705	Y12	PV Estimated Cost	$ 3,660
Y3	PV Annual Benefit	$ 105,249	Y13	PV Annual Benefit	$ 53,503
Y3	PV Estimated Cost	$ 6,730	Y13	PV Estimated Cost	$ 3,421
Y4	PV Annual Benefit	$ 98,364	Y14	PV Annual Benefit	$ 50,003
Y4	PV Estimated Cost	$ 6,289	Y14	PV Estimated Cost	$ 3,197
Y5	PV Annual Benefit	$ 91,929	Y15	PV Annual Benefit	$ 46,732
Y5	PV Estimated Cost	$ 5,878	Y15	PV Estimated Cost	$ 2,988
Y6	PV Annual Benefit	$ 85,915	Y16	PV Annual Benefit	$ 43,675
Y6	PV Estimated Cost	$ 5,493	Y16	PV Estimated Cost	$ 2,793
Y7	PV Annual Benefit	$ 80,294	Y17	PV Annual Benefit	$ 40,818
Y7	PV Estimated Cost	$ 5,134	Y17	PV Estimated Cost	$ 2,610
Y8	PV Annual Benefit	$ 75,041	Y18	PV Annual Benefit	$ 38,147
Y8	PV Estimated Cost	$ 4,798	Y18	PV Estimated Cost	$ 2,439
Y9	PV Annual Benefit	$ 70,132	Y19	PV Annual Benefit	$ 35,652
Y9	PV Estimated Cost	$ 4,484	Y19	PV Estimated Cost	$ 2,280
Y10	PV Annual Benefit	$ 65,544	Y20	PV Annual Benefit	$ 33,319
Y10	PV Estimated Cost	$ 4,191	Y20	PV Estimated Cost	$ 2,130

20-Year Monetized Benefits =	**$ 1,365,939**
20-Year Estimated Costs =	**$ 530,136**

Benefit-Cost Ratio =	**2.58 :1**
Return-on-Investment =	**158%**

Transportation System Management and Operations - Traffic Infrastructure Process

Project Benefit-Cost Analysis - CCTV Camera

Region:	BTO
Proposed Project Name:	Sample DMS and CCTV Project
Requested By:	Sample User

1 What is the anticipated cost of the project?

$130,000

2 What is the anticipated number of cameras to be installed for the project?

2

3 Please complete the guidance analysis below. If more than one camera is being requested, it is recommended that each location is considered separately because there may be different responses to the questions below. However, if multiple camera locations are included in this analysis, respond to each question collectively. Based on your responses , the following CCTV Camera Guidance have been met:

G1, Signal Control	NOT SUPPORTED
G2, Traffic Incident	NOT SUPPORTED
G3, Weather Verification	SUPPORTED
G4, Traveler Information	SUPPORTED
G5, Field Device Verification	SUPPORTED
G6, Work Zone	NOT SUPPORTED

CCTV Camera Guidance Analysis:

The ITS Planning Guidance below was completed by an ENTERPRISE Pooled Fund Study and is used here to help define the intent of the proposed camera.

CCTV Guidance #1 - Traffic Observation for Signal Control Changes

Consideration		Response
1	There are typically periods of time at least twice per week of 'loaded' cycles (i.e. where the vehicles in the queue do not all dissipate in one green cycle) that last 15 minutes or longer.	NO
2	The signalized intersection has sufficient cross street traffic such that visual observation is needed determining if alternate signal timings are appropriate to benefit the primary direction of flow (i.e. in order to verify that the secondary street is not backing up).	NO
3	The operations personnel have the ability to activate special event timing plans remotely.	NO
	CCTV Guidance #1 is:	NOT SUPPORTED

CCTV Guidance #2 - Traffic Incident or Event Verification

Consideration		Response
1	The candidate location encounters incidents as frequently as twice per month for arterial streets or once per month for freeways.	NO
2	The incidents and events that occur on freeways typically cause delay to travelers of at least 15 minutes while the incident is active and has not been cleared.	NO
3	The incidents and events that occur on arterials typically impact travel such that the signal progression is no longer occurring and vehicles in queues are unable to clear intersections during the cycle's allotted green time.	NO
4	Incident location verification is needed by 911 dispatchers (e.g. large complex interchange where drivers don't know where they are, closely spaced interchanges).	NO
5	The location encounters at least 2 hours per day of peak period travel where traffic flow exceeds 1,100 veh/hr/lane.	NO
6	The location encounters conditions considered Level of Service C.	NO
7	The location encounters average annual daily traffic (AADT) of 16,800 for a 2 lane road; 33,600 for a 4 lane road; 50,400 for a 6 lane road, 67,200 for an 8 lane road.	NO
	CCTV Guidance #2 is:	NOT SUPPORTED

CCTV Guidance #3 - Weather Verification

Consideration		Response
1	The location typically encounters at least 10 weather events each season.	YES
2	Weather events have a significant impact to travelers at this location (due to such circumstances as either: local terrain, lack of alternate routes, winding or steep routes), and it is a location that travelers are frequently concerned about.	YES
3	If there are no nearby weather sensors reporting real-time conditions.	YES
4	If there are no regular manual observations and reports of visibility, precipitation, or pavement temperatures.	YES
5	If nearby weather sensors would be enhanced through the capability of visual observation.	NO
	CCTV Guidance #3 is:	SUPPORTED

CCTV Guidance #4 - Traveler Information

Consideration		Response
1	The location visible by the camera image has a history of congestion on a regular basis (i.e. each commuter day is a candidate for congestion).	NO
2	The location is prone to weather situations that travelers would not otherwise be forewarned about (e.g. spots where fog regularly forms, bridges that ice early, mountain passes with weather that differs	YES
3	The location is in a remote area that receives considerable traffic volume due to commercial vehicle traffic or recreational traffic.	YES
4	The majority of travelers to the area have Internet access in proximity to the area where camera images are of value to travelers prior to departure.	YES
	CCTV Guidance #4 is:	SUPPORTED

CCTV Guidance #5 - Field Device Verification

Consideration		Response
1	The proper operations of the device can be remotely monitored by a camera.	YES
2	The failure of the device presents a safety hazard.	NO
3	The camera operation would avoid unnecessary trips to verify functionality of the field device.	NO
	CCTV Guidance #5 is:	SUPPORTED

CCTV Guidance #6 - Intelligent Work Zone

Consideration		Response
1	The alignment or traffic control that is visible by a camera image is expected to change periodically during the construction period.	NO
2	The construction zone encounters periods of queues or delays for at least 30 minutes each day.	NO
3	The construction zone is in a location where there is not a convenient alternate route for the majority of traffic to deviate from the typical route.	NO
	CCTV Guidance #6 is:	NOT SUPPORTED

4 Using each of the following Needs Analysis Tool presets, provide the anticipated level of need in the vicinity of the proposed project (Project Information sheet will populate these cells):

Default TIP	MEDIUM
Safety	MEDIUM
Mobility (Present)	MEDIUM
Mobility (Future)	MEDIUM
Service	MEDIUM
Freight Performance	MEDIUM

Safety Benefits

S1. How many crashes, by severity type, occurred in the past year at this intersection or corridor? If using the Needs Analysis Tool to obtain crash data, divide the 5 year crashes by 5 to provide an average annual number of crashes.

0	Fatal Injury
1	Suspected Serious Injury
	Suspected Minor Injury
	Possible Injury
10	Property Damage-Only

Estimated Safety Benefit: $5,000

Mobility Benefits

M1 (G1,G2, G3, G4, G6). What is the estimated AADT for all vehicles entering the intersection (the Needs Analysis Tool may be used to obtain the value - note that volume is reported per roadway and not bi-directional)?

11,300 vehicles per day

M2 (G1). What is the average Relative Need at this location according to the Needs Analysis Tool - Service preset?

MEDIUM

M1 (G2, G3, G4, G6). Estimate the average number of traffic events that occur per year within site distance of the proposed camera(s).

5 events per year

M2 (G2, G3, G4, G6). Estimate the average duration (minutes) of the traffic events that occur within site distance of the proposed camera.

90 minutes

Estimated Annual Mobility Benefit: $27,000

Productivity Benefits

P1. It is assumed that productivity benefits will be realized through reduced maintenance efforts / verification site visits (i.e. if a camera can be used to verify the location of debris or verify functionality of traffic signal). Estimate for how long maintenance efforts / verification site visits have been increasing at the proposed device replacement location(s).

6 months

P2. How many TOAMS tickets have been required at this location over the length of time indicated above in P1? (if request is for multiple intersections, include cumulative total here).

3 tickets

P3. What was the total cost of these tickets?

$600

P4. What is the anticipated percent reduction of maintenance tickets due to the proposed project?

6 - 15

Estimated Annual Productivity Benefit: $126

Benefit-Cost Analysis

Y1	Annual Benefit	$	33,856	Y6	PV Annual Benefit	$	24,139
Y1	Estimated Cost	$	130,000	Y6	PV Estimated Cost	$	2,875
Y2	PV Annual Benefit	$	31,641	Y7	PV Annual Benefit	$	22,560
Y2	PV Estimated Cost	$	4,032	Y7	PV Estimated Cost	$	2,687
Y3	PV Annual Benefit	$	29,571	Y8	PV Annual Benefit	$	21,084
Y3	PV Estimated Cost	$	3,522	Y8	PV Estimated Cost	$	2,511
Y4	PV Annual Benefit	$	27,637	Y9	PV Annual Benefit	$	19,704
Y4	PV Estimated Cost	$	3,291	Y9	PV Estimated Cost	$	2,347
Y5	PV Annual Benefit	$	25,829	Y10	PV Annual Benefit	$	18,415
Y5	PV Estimated Cost	$	3,076	Y10	PV Estimated Cost	$	2,193

10-Year Monetized Benefits = $ 254,435

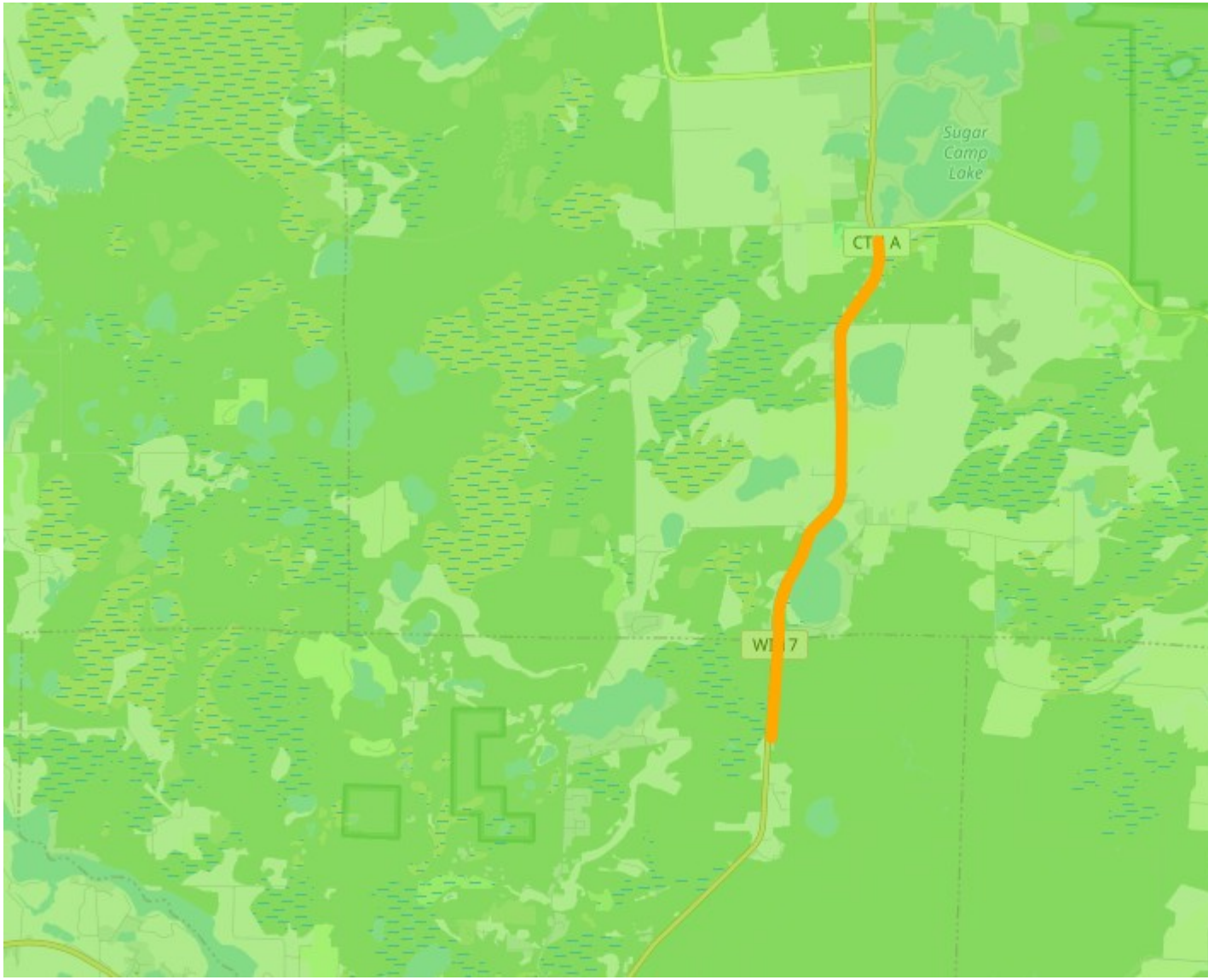
10-Year Estimated Costs = $ 156,532

Benefit-Cost Ratio = 1.6 :1

Return-on-Investment = 63%

Region	Visible Extent
Preset	Default TIP
MM Versic	July 2025

Parameter Weights	
aadtyr_1	10
aadtyr_20	7
crash_rate	15
crash_seve	13
event	11
growth_20	7
losyr_1	12
losyr_20	12
trkdyr_1	4
weather	9



PdpId	hwyadir	aadtyr_1	aadtyr_5	aadtyr_10	aadtyr_15	aadtyr_20	losyr_1	losyr_5	losyr_10	losyr_15	losyr_20	trkdyr_1	trkdyr_20	crash_rate	crash_sev	weather	event	Default TIP	Safety	Mobility Present	Mobility Future	Service	Freight Performance
3651	017N	6770	6980	7230	7470	7690	4.33	4.41	4.41	4.5	4.58	11.3	11.3	89.6859	34	63	2	0.7612	0.652	0.5326	0.7833	0.9823	0.6783
3648	017N	6770	6980	7230	7470	7690	4.33	4.41	4.41	4.5	4.58	11.3	11.3	83.7069	18	62	2	0.714	0.531	0.5326	0.7833	0.9823	0.6783
3650	017N	6770	6980	7230	7470	7690	4.33	4.41	4.41	4.5	4.58	11.3	11.3	41.0831	8	62	2	0.6293	0.2864	0.5326	0.7833	0.9823	0.6783
3649	017N	6770	6980	7230	7470	7690	4.33	4.41	4.41	4.5	4.58	11.3	11.3	39.1154	6	62	2	0.6103	0.2291	0.5326	0.7833	0.9823	0.6783